REMARKS

Applicant requests entry of the present amendments which conform the claims to U.S. practice. No new matter is being introduced by this Amendment as antecedent support is set forth in the original specification and in the original claims.

Prosecution on the merits is respectfully requested.

The Examiner is invited to contact Applicant's Attorneys at the below-listed telephone number regarding this Preliminary Amendment or otherwise regarding the present application.

If there are any charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

Respectfully submitted,
YOUNG HOON PARK

CANTOR COLBURN LLP
Applicant's Attorneys

By: ____________________
Daniel F. Drexler
Registration No. 47,535
Customer No. 23413

Date: May 3, 2001
Address: 55 Griffin Road South, Bloomfield, CT 06002
Telephone: 860-286-2929

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

The last paragraph on the first page of the specification is amended as follows:

"To achieve the above objective, the present invention provides a thin film deposition reactor including a reactor block [110] on which a wafer is placed, a shower head plate [120] for uniformly maintaining a predetermined pressure by covering the reactor block [110], a wafer block [140] installed in the reactor block [110], on which the wafer is to be seated, and an exhausting portion [(not shown)] connected to the reactor block [110] for exhausting a gas [within] from the [rector] reactor block [110 to the outside]. The thin film deposition reactor [is characterized in that the improvement] further includes: a first connection line [121 installed on] in communication with the shower head plate [120], through which a first reaction gas and/or inert gas [supplied] flow; a second connection line [122 installed on] in communication with the shower head plate [120], through which a second reaction gas and/or inert gas [supplied] flow; and a diffusion plate [130 installed under] mounted on a lower surface of the shower head plate [120]. This diffusion plate has a plurality of spray holes [131,] which are [connected to] in communication with the first connection line [121] and face the upper surface of [a] the wafer [w] to spray the first reaction gas and/or inert gas onto the wafer [w], and a plurality of nozzles [133,] which are [connected to] in communication with the second connection line [122] and [look] extend toward the inner side surface of the reactor block [110] to spray the second reaction gas and/or inert gas toward [the] edges of the wafer [w]."

IN THE CLAIMS

A "marked up" version of Claims 1-8, 10-11, and 13-14 follows:

1. (Amended/Marked up) A thin film deposition reactor comprising:
a reactor block [110] on which a wafer is placed;
a shower head plate [120] for uniformly maintaining a predetermined pressure by

covering the reactor block [110];

a wafer block [140] installed in the reactor block [110], on which the wafer is to be seated;

an exhausting portion [(not shown)] connected to the reactor block [110] for exhausting a gas [within] from the [rector] reactor block [110 to the outside];

a first connection line [121 installed on] in communication with the shower head plate [120], through which a first reaction gas and/or inert gas [supplied] flow;

a second connection line [122 installed on] in communication with the shower head plate [120], through which a second reaction gas and/or inert gas [supplied] flow; and

a diffusion plate [130 installed under] mounted on a lower surface of the shower head plate [120], the diffusion plate having a plurality of spray holes [131,] which are [connected to] in communication with the first connection line [121] and face the upper surface of [a] the wafer [w] to spray the first reaction gas and/or inert gas onto the wafer [w], and a plurality of nozzles [133,] which are [connected to] in communication with the second connection line [122] and [look] extend toward the inner side surface of the reactor block [110] to spray the second reaction gas and/or inert gas toward [the] edges of the wafer [w].

2. (Amended/Marked up) The thin film deposition reactor of claim 1, wherein [the bottom of] the diffusion plate [130 is] has a lower surface of a concave form.

3. (Amended/Marked up) The thin film deposition reactor of claim 1, wherein [the bottom of] the diffusion plate [130 is] has a lower surface of a convex form.

4. (Amended/Marked up) The thin film deposition reactor of claim 1, wherein the diffusion plate [130 is made up of] further comprises a first diffusion plate [130a having] in communication with the plurality of spray holes [131 connected to] and the first connection line [121], and a second diffusion plate [130b having] in communication with the plurality of nozzles [133 connected to] and the second connection line [122].

5. (Amended/Marked up) The thin film deposition reactor of claim 1, further comprising a first mixing portion [134 formed] at [the] a center of the inside of the diffusion plate [130,] for [equally] mixing the first reaction gas and the inert gas and diffusing the mixture to the spray hole [131].

6. (Amended/Marked up) The thin film deposition reactor of claim 1, further comprising a second mixing portion [135 formed] between the second connection line [122] and the shower head plate [120] for [evenly] mixing the second reaction gas and the inert gas, the second mixing portion [135] having an auxiliary diffusion plate [135a] in which holes [135b] are formed.

7. (Amended/Marked up) The thin film deposition reactor of claim 1, wherein an area of the diffusion plate on which the spray holes [131] are formed is larger than the wafer.

8. (Amended/Marked up) The thin film deposition reactor of claim 1, wherein the diameter of each of the spray holes [131] is 1 to 2.5 mm.

10. (Amended/Marked up) The thin film deposition reactor of claim 9, wherein the [cross-section of the diffusion plate between] spray hole[s is shaped of upsidedown T] comprises an upper end and a lower end, and the upper end has a diameter larger than that of the lower end so that thermal energy from the wafer block is evenly [conducted] transferred to the shower head plate to prevent the diffusion plate [130] from being overheated.

11. (Amended/Marked up) The thin film deposition reactor of claim 10, wherein [the cross-section of] the diffusion plate [portion between spray holes is] has a thickness of at least 5mm [high] to prevent the diffusion plate from being bent at a high temperature.

13. (Amended/Marked up) The thin film deposition reactor of claim 1, wherein

[the interval (D)] a distance between the diffusion plate and the wafer block [140] is 20 to 50mm.

14. (Amended/Marked up) The thin film deposition reactor of claim 1, further comprising a pumping baffle [150] which is installed on the outer circumference of the wafer block [140, and has], the pumping baffle comprising a sidewall [150a installed on] placed around the lateral side of the wafer block [140 and], a bottom wall [150b] extended outward from a lower end of the sidewall, and [through which symmetrical] holes [150c are] formed in the bottom wall[, in order to improve the equality of the thickness of a thin film on a wafer].

IN THE ABSTRACT

A marked up version of the Abstract follows:

"A thin film deposition reactor including a reactor block [110] on which a wafer is placed, a shower head plate [120] for uniformly maintaining a predetermined pressure by covering the reactor block [110], a wafer block [140] installed in the reactor block [110], on which the wafer is to be seated; an exhausting portion [(not shown)] connected to the reactor block [110] for exhausting a gas [within] from the [rector] reactor block [110 to the outside]; a first connection line [121 installed on] in communication with the shower head plate [120], through which a first reaction gas and/or inert gas [supplied] flow, a second connection line [122 installed on] in communication with the shower head plate [120], through which a second reaction gas and/or inert gas [supplied] flow[.], and a diffusion plate [130 installed under] mounted on a lower surface of the shower head plate [120]. The diffusion plate has a plurality of spray holes [131,] which are [connected to] in communication with the first connection line [121] and face the upper surface of [a] the wafer [**w**] to spray the first reaction gas and/or inert gas onto the wafer [**w**], and a plurality of nozzles [133,] which are [connected to] in communication with the second connection line [122] and [look] extend toward the inner side surface of the reactor block [110] to spray the second reaction gas and/or inert gas toward [the] edges of the wafer [**w**]."